

County of San Diego
Revised: December 7, 1990
Reviewed: Spring 2003

ASSISTANT PLANT PATHOLOGIST/NEMATOLOGIST
PLANT PATHOLOGIST/NEMATOLOGIST

Class No. 005419
Class No. 005420

DEFINITION:

To perform professional laboratory and field work concerning the diagnosis of plant diseases and the identification and classification of nematodes and other plant pathogens; to advise on methods of detection, control, and eradication of plant diseases and nematodes; and to perform related work as required.

DISTINGUISHING CHARACTERISTICS:

Positions allocated to these classes are found only in the Department of Agriculture/Weights and Measures. Plant Pathologists/Nematologists are responsible for diagnosing plant diseases and identifying and classifying nematodes and other plant pathogens.

Assistant Plant Pathologist/Nematologist:

This is the entry-level class in the Plant Pathologist/Nematologist series. Under general supervision, an Assistant Plant Pathologist/Nematologist performs laboratory and fieldwork in identifying plant pathogens and nematodes.

Plant Pathologist/Nematologist:

This is the journey-level class in this series. Under direction, a Plant Pathologist/Nematologist works independently in identifying plant pathogens and nematodes, acting as liaison with outside agencies, and conducting training programs and seminars.

These classes differ from the next higher level, Supervising Plant Pathologist/Nematologist, in that the latter has administrative responsibility over the Plant Pathology/Nematology program and supervises subordinate Plant Pathologists/Nematologists.

EXAMPLE OF DUTIES:

Assistant Plant Pathologist/Nematologist:

Identifies and classifies plant diseases and nematode samples by conducting inoculations, assays, isolations, statistical analyses, and other scientific laboratory tests; interprets microscopic examinations, maintains stock cultures, and prepares slide mounts of pathogenic organisms; utilizes identification keys to properly identify and classify nematodes and records information to records or files; participates in the County-wide nursery nematode inspection program and in other State mandated agricultural programs; assists in conducting disease and nematode surveys in commercial crop and floriculture areas of the County; advises farmers and nursery workers on control measures for nematodes and plant diseases; performs quarantine inspections of incoming plant shipments; may develop inspection programs for exotic pests; coordinates with state agricultural personnel regarding the status of samples, lab procedures, and required programs; assists citizens by diagnosing samples and advises on appropriate action; reviews scientific journals and periodicals in the Plant Pathology/Nematology field; represents the department at meetings; prepares reports; and acts as a qualified back-up in the absence of the Plant Pathologist/Nematologist.

Plant Pathologist/Nematologist:

Identifies plant diseases and nematode samples by conducting inoculations, assays, isolations, statistical analyses and other scientific laboratory tests; uses laboratory equipment such as a microscope, autoclave, hot air oven, culture hood, ultra-violet lamp, pH meter, slide warmer, mist extractor, centrifuge, and other equipment; prepares cultures, stains, media, and slide mounts; provides information and advises staff, outside agencies, and the public on plant diseases and nematodes and the use of herbicides, fungicides, fumigants, and bactericides for controlling plant disorders; participates in task forces or multi-agency committees in the area of plant pathology; performs field and nursery inspections and prepares reports; maintains record and files on laboratory examinations and diagnoses; conducts training seminars or formal training programs for Agriculture staff and other departments or agencies; provides technical assistance to subordinate laboratory staff and may assist with the development and implementation of Plant Pathology/Nematology programs; and reviews scientific journals and other literature to learn and provide information on new developments in the area of Plant Pathology/Nematology.

MINIMUM QUALIFICATIONS:

Knowledge Level: T = Thorough; G = General; -- = Not Applicable

Classification Level: APP/N = Assistant Plant Pathologist/Nematologist
 PP/N = Plant Pathologist/Nematologist

Knowledge of:**APP/N PP/N**

G	T	Scientific investigative procedures and techniques used to isolate, identify, evaluate, and classify plant diseases, nematodes, and other pathogens, such as viruses, fungi, and bacteria.
G	T	Laboratory equipment utilized to identify plant pathogens, including electron, dissection and compound microscopes, pH meter, incubator, autoclave, mist extractor, centrifuge, culture hood, and ultraviolet lamp.
G	T	Proper lab procedures, including the use and preparation of culture medias and sterilization methods.
G	T	Methods used to prevent, control, and eradicate nematodes and plant diseases.
G	T	Herbicide, fungicide, fumigant and bactericide usage and application.
G	T	Species of common and recognizable nematodes and their characteristics.
G	T	The relationships of plants, plant pests, and pest control to agriculture and the environment.
G	T	Distinctions between environmental and physiological symptoms of plants.
G	T	Agricultural, horticultural, and native plants and related nomenclature.
G	T	Literature sources pertaining to plant pathology and nematology.
G	T	Agricultural methods and marketing procedures.
--	G	Training principles.
--	G	Environmental protection Principles.
--	G	Agricultural operations as a business.
--	G	Agricultural industry concerns relating to plant disease and nematode control laws and regulations.

Skills and Abilities to:**Assistant Plant Pathologist/Nematologist:**

- Correctly identify and diagnose plant disease, nematode, and pathogen samples.
- Properly utilize a wide range of laboratory equipment including compound and electron microscopes.

- Effectively accomplish the goals of state-mandated agricultural programs related to plant pathology and nematology.
- Perform on-site field visits to assess plant problems and recommend appropriate control measures.
- Establish and maintain effective working relationships with state and County agricultural personnel, farmers, nursery workers, and the public.

Plant Pathologist/Nematologist:

In addition to those listed above:

- Prepare and conduct training seminars for staff, other agency members and interested parties.
- Assist in the development and implementation of training programs which instruct personnel in methods of detecting and identifying plant diseases and pathogenic organisms.
- Assist in evaluating and developing laboratory procedures.

EDUCATION/EXPERIENCE:

Education, training, and/or experience which would likely demonstrate possession of the knowledge, skills and abilities stated above are. Examples of qualifying education/experience are:

Assistant Plant Pathologist/Nematologist:

A Bachelor of Science degree in one of the biological sciences, with emphasis on courses in plant pathology, nematology, mycology, bacteriology, and virology; AND, one (1) year of experience working in a plant pathology lab. In order to be qualifying, this experience must have included the use of identification keys to identify plant parasitic nematodes.

Plant Pathologist/Nematologist:

A Bachelor of Science degree in one of the biological sciences, with emphasis on courses in plant pathology, nematology, mycology, bacteriology, and virology; AND, two (2) years of experience performing laboratory examinations and analysis in identifying and diagnosing the presence of plant pathogens and nematodes; OR, one year of experience as an Assistant Plant Pathologist/Nematologist in the County of San Diego.

SPECIAL NOTES, LICENSES, OR REQUIREMENTS:

Certification:

Incumbents must possess licenses in the two following Agricultural Biologist (Inspector) categories as issued by the Director of the California Department of Food and Agriculture:

- Plant Quarantine and Pest Detection
- Nursery and Seed Regulation

License:

A valid California Class C driver's License or the ability to arrange transportation for field travel is required at time of appointment and must be maintained throughout employment. Employees in this class may be required to use their personal vehicle.